

REMARKS

Claims 1-4, 6, 7, 10-14 and 16-19 currently appear in this application. The Office Action of July 25, 2007, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Amendments to the Claims

Claim 1 has been amended to define an α -isomaltosyl glucosaccharide-forming enzyme with its enzymatic function. Support for this amendment can bee found in the specification as filed at page 9, lines 16-25.

Claim 3 has been amended by incorporating the subject matter of claim 5 therein to define the saccharide composition in the reaction mixture. Claim 18 has been amended in a similar fashion. Minor cosmetic amendments have been made to claims 2, 6, 7, 11-13 and 16.

Claims 5, 9, 15 and 20 have been cancelled.

Claim Objections

Claims 2, 3, 5, 7, 11, 13, 15, 17, 18 and 20 are objected to because of the word "where." The Examiner has suggested replacing the word "where" with -wherein--. Claims

2, 3, 7, 11, 13, 17 and 18 have been amended in accordance with the Examiner's helpful suggestion. Claims 5, 15 and 20 have been cancelled.

Claim 3 is objected to because it recites the single word "cannot" as two words. Claim 3 has been amended, although it is not understood why "can not" be considered an acceptable English expression.

Claims 3, 5, 11, 15 and 20 are objected to because there is an extra space in the name of the compounds. Claims 3 and 11 have been corrected, and claims 5, 15, and 20 have been cancelled.

Claims 5, 11, 15 and 20 are objected to because they recited 10 w/w%." This has been amended to "10% (w/w) ."

Claims 7, 13 and 17 are objected to because the recitation "collected in a form of syrup, powder or crystal in its collecting" does not comply with standard English. These claims have been amended by deleting the phrase "in its collecting."

Rejections under 35 U.S.C. 112

Claims 2, 3, 5, 6, and 10-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has pointed out that the recitation "the reaction mixture" in

claim 2 has no antecedent in claim 1. This rejection is respectfully traversed.

Claim 1 has been amended to recite "the reaction mixture." Since claim 2 is now definite, claims 10-13, 18 and 19 (claim 20 has been cancelled) should be definite.

Claim 5 has been cancelled, so this rejection is now moot.

Claims 3 and 11 have been amended to recite "each of" before the two saccharides.

Claims 6, 12 and 16 have been amended to delete the optional step. This material has been resubmitted in new claims 21-23.

Art Rejections

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al., U.S. patent 5,137,723. This rejection is respectfully traversed.

The Examiner states that Yamamoto teaches mixing maltose and L-ascorbic acid (L-AA) in a single addition, then adding rat intestine α -glucosidase (RIAGase) to the solution to yield 2-O- α -glucopyranosyl-L-ascorbic acid (AA-2G). It should be noted that Yamamoto uses α -glucosidase to produce AA-2G.

In contrast to Yamamoto, the presently claimed invention uses an α -isomaltosyl glucosaccharide-forming enzyme, which is not α -glucosidase. To differentiate between the two enzymes, claim 1 has been amended to recite the enzymatic functions of α -isomaltosyl glucosaccharide-forming enzyme. The α -glucosidase used in Yamamoto does not have such enzymatic function. Therefore, it is respectfully submitted that the present invention is distinct from the Yamamoto disclosure.

Furthermore, the α -glucosidase used in Yamamoto catalyzes a hydrolysis reaction, and therefore it cannot catalyze an α -glucosyl-transferring reaction "without substantially increasing the reducing power of the reaction mixture." In contrast, as recited in claim 1 as amended, the α -isomaltosyl glucosaccharide-forming enzyme used in the herein claimed invention catalyzes an α -glucosyl-transferring reaction "without substantially increasing the reducing power of the reaction mixture." This is another point of distinction between the herein claimed process and that of Yamamoto.

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Amd. dated October 24, 2007
Reply to Office Action of July 25, 2007

Double Patenting

It is appreciated that applications 11/797,932 and 11/797,969 are said to share inventors with the present application and may claim overlapping subject matter.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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